

## IN THE SPECIFICATION

Please amend the specification as follows:

- (i) Please replace paragraph 0035 with the following new paragraph:

**[0035]** The selected low frequency bins and high frequency bins may vary depending upon which loop characteristic is being determined. For example, as discussed above in reference to Figure 4, low frequency bins of 1500Hz, 1600 Hz, and 1950 Hz, and high frequency bins of 3450 Hz, 3600 Hz, and 3750 Hz distinguished loaded loops from non-loaded loops by approximately 10 dB. These frequency bin values did not provide optimal distinction for loop length determination. Conversely, the frequency bins used for loop length determination, described in Figure 5, namely low frequency bins of 600Hz, 750 Hz, and 1050 Hz and high frequency bins of 3450 Hz, 3600 Hz, and 3750 Hz, distinguished loaded loops from non-loaded loops by only approximately 4-5 dB. ~~Appendix A~~Figure 7 illustrates the effect frequency bin values have on distinguishing the presence or absence of a loading coil on a loop. ~~Appendix B~~Figure 8 illustrates the effect frequency bin values have on distinguishing the loop length.

- (ii) After paragraph 0018, line # 3, please insert paragraphs 0019 and 0020 as follows:

**[0019]** Figure 7 illustrates the effect frequency bin values have on distinguishing the presence or absence of a loading coil on a loop.

**[0020]** Figure 8 illustrates the effect frequency bin values have on distinguishing the loop length.